HIGH DENSITY MOLECULAR ARRAYS ON POROUS SURFACES

ABSTRACT OF THE DISCLOSURE

The present invention provides a unique and highly accurate method for generating molecular arrays of very high density on porous surfaces. The method involves the application of focused acoustic energy to each of a plurality of fluid-containing reservoirs to eject a small fluid droplet--on the order of 1 picoliter or less--from each reservoir to a site on a porous substrate surface. High density molecular arrays are provided as well, in which greater than about 62,500 molecular moieties, serving as array elements, are present on a porous surface. Biomolecular arrays that can be generated using focused acoustic ejection include oligonucleotide arrays and peptidic arrays.